The promise of creative/participatory mapping practices for sport and leisure research

This paper provides an introduction to the concept of creative participatory mapping of human-environment relations. It is identified that within human geography, artistic practice and urban design, biomapping and similar community mapping tools and methodologies are increasingly being embraced. However, within sports and leisure research the concept has yet to gain academic attention. Consequently, this paper provides a basis for thinking about how researchers and research participants in the fields of sport and leisure research might benefit if mapping human-environment relations was to be embraced and integrated into research design practices. Referencing recent turns to studying space and affect within sport and leisure studies, mapping is argued to offer innovative methodological opportunities for studying how people relate to and understand the urban environments in which they practice physical activity and leisure forms of embodiment. The paper concludes by arguing that, along with offering up new avenues for conceptual research, mapping human-environment relations, if readily embraced, can go a long way to fostering community engagement in: the identification of (un)safe urban routes for sport/leisure practice (e.g. running, cycling), the development and site identification of health/physical activity initiatives and the design of urban landscapes of sport/leisure.

Keywords: mapping, GPS, GIS, sport, leisure, health, body, technology, affect, urban planning

Introduction

In this paper I seek to draw the attention of researchers within the fields of sport and leisure studies to the potential of creative participatory mapping practices. Made popular by (among others) Christian Nold, practices such as bio- or emotion- mapping can be described as an ‘evolutionary methodology and tool for visualising people's reactions to the external world’ (Nold, n.d.). As such, creative approaches to mapping can offer researchers a means for collecting embodied data and situating this within the

landscape. The term *biomapping* as an iteration of such practices involves collecting geolocated 'arousal' data from dwellers across the globe, combining the use of wearable global positioning system trackers[1] (GPS) and Galvanic Skin Response[2] (GSR) sensors. Whilst not limited to urban contexts for successful functioning, such tools have to date mostly facilitated the mapping of emotional data (such as fear, pleasure, discomfort, elation etc.) onto distinct cityscapes in a variety of both individually and communally produced artistic cartographic interpretations[3].

Since Nold's innovative application of this combination of technologies, a number of academics have embraced both the terms 'Biomapping' and 'Emotion Mapping'(Caquard, 2013a, 2013b; Caquard & Cartwright, 2014; Crabtree, Nold, Shumack, & Tuckwell, 2011; MacDonald, 2014; Pinder, 2013), whilst also adopting his methodological approach (Anderson, n.d.). Nold, outlines in his book *Emotional Cartography* (2009, p. 4), the breadth of interest his work has received in fields far beyond his home discipline of artistic practice:

> People approached me with a bewildering array of commercial applications: estate agents in California wanting an insight into the geographical distribution of desire; car companies wanting to look at drivers' stress, doctors trying to re-design their medical offices, as well as advertising agencies

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[1] Such as GPS running watches or mobile phone mapping/tracking apps

[2] Using GSR sensors, one can measure the electrical conductance of the skin. Simply put, the more a person sweats, the easier it is for skin to conduct electricity. Thus, skin conductance is believed to represent physiological and psychological 'arousal' to the external environment, as sweat is controlled by the nervous system.

[3] For exemplary maps and artistic 'products' see Christian Nold's project website:

http://biomapping.net

> wanting to emotionally re-brand whole cities. Other emails arrived from academic sociologists, geographers, futurologists, economists, artists, architects and many urban planners, trying to get new mental insights into their own disciplines.

Such broadly situated interest is not surprising given the novel insight into embodied perception/relation of/to place the methodology affords, not least the potential it offers for simplistic and easy to understand visualisations of embodied data. Notable though is the absence of interest and take up of similar approaches to data collection and representation by sport and leisure researchers, whose foci of academic interest is so often concerned with the links between the body, mobility and the influence of spatial settings on embodied practice, emotional resilience and physiological adaptation. Indeed, within popular culture, participatory mapping of sport and physical activity has become in some domains an almost central element of the activity (e.g. geocaching and running).

This paper then is reactionary in its purpose, calling for iterations of participatory/creative mapping techniques of human-environment relations to be explored, challenged, embraced and complicated within sport and leisure contexts. In what follows I initially outline the variety of ways in which such mapping has been adopted by academic researchers and artists. In the latter half of the literature review, I move on to consider the ways in which sport and leisure communities are already engaging with both individual and community mapping activities, arguably pointing towards the value of understanding such activities and interpreting the meanings and understandings gleaned from these by sport and leisure practitioners. Before concluding, I articulate the methodological, representational and practical potential that innovative mapping practices offer to sport and leisure studies.

Mapping Human-Environment relations: an overview of existing iterations

Academic/Artistic

The contemporary landscape of engagement with creative/participatory mapping technologies and practices is patchy. However, since the early 2000s when the US government freed access to GPS technologies for popular use, they have begun to gain steady momentum. Research that has embraced Nold's and similar versions of mapping practices has tended to emanate from the disciplines of human geography (often termed cartographic theory), art (known as locative media), urban planning, methodological innovation and local politics. Pinder (2013, p. 524) argues that those who have embraced such tools for spatial study (such as Hemment, 2006; Tuters & Varnelis, 2006; Zeffiro, 2012) are 'opening up a manifold of different ways in which geographical space can be encountered and drawn, and presenting a frame through which a wide range of spatial practices may be looked at anew'. Indeed, the creation of creative yet purposeful maps that capture mobile rather than static forms of movement is of contemporary concern and a key area of theoretical and practical development within cartographic study (Andrienko et al., 2010; Dodge, Kitchin, & Perkins, 2011; Dykes & Mountain, 2003; Kitchin, Dodge, & Perkins, 2011; Perkins, Kitchin, & Dodge, 2011).

The point of engagement for both artists and human geographers stems from a mutual interest in how people relate to their surroundings; a central concern throughout the historical development of both disciplines. However, whilst geographers seem to have embraced the opportunities afforded by mapping practices, to better understand the intangible variables and affects that shape our emotional responses to certain landforms and landscapes (Adey, Bissell, Hannam, Merriman, & Sheller, 2014), artists have been

more readily concerned with using biomapping approaches to challenge *how* we understand and relate to the world. As Pinder (2013, p. 524) states 'one continued significance of locative art is its potential ability to interrupt and to make strange ways of seeing and locating that are becoming increasingly normalized and taken-for-granted, so as to render them perceptible and open to question'. The overarching supportive theoretical framework evident in such studies originates from a non-representational standpoint (Aitken & Craine, 2006; Anderson, n.d.; Gemeinboeck & Saunders, 2011; Kwan, 2007; MacDonald, 2014) with authors also laying claim to advancing more traditional 'psychogeographical' modes of inquiry, which foreground the importance of human emotion and performance in "worldmaking". A new set of tools and 'performative technologies' (e.g. GPS trackers, various software applications, accelerometers, wearable health technologies, wearable camera and audio recording devices) for facilitating the creation of spatial visualizations such as network diagrams (Holmes, 2007), cinematic and digitized storytelling (Kekou, 2013), emotion maps (Nold, 2009), trail/pathway highlights (Holmes, 2007; Kekou, 2013; Nold, 2009; Paraskevopoulou, Charitos, & Rizopoulos, 2008). In terms of methodological innovation, Nold (2009) wants to make clear that such technology is *performative* in two distinct ways (MacDonald, 2014, pp. 118-119), both of which have been explored in the works cited here:

1) 'it allows people to walk and experience their localities as performances, rendering the familiar strange through the knowledge that this prosthesis is making their intimate body states legible for a future audience'.

2) 'the device and the quasi-scientific affect data that it has produced, work to mediate social relationships between strangers whose only

connection may be a mutual relationship with the area being mapped.'

Understanding creative human-environment mapping practices as a methodology in this way points to the political potential imbued into such cartographic techniques. Thus mirroring similar concerns with power relations commonly explored in the works of arts practitioners (Meneley, 2011). Repurposing 'big brother', 'society of control' or what Donna Harraway (2004) has called 'the god trick' application(s) of GPS and surveillance technology, to instead highlight the technology's use for local, community and individual empowerment, through the development of situated knowledges and subjective relations, is just one way in which this political potential is being explored (MacDonald, 2014; Pinder, 2013). Thus concurrent, and at odds with the growth of CCTV and monitoring technologies in urban landscapes, is the take up of biomapping and other community mapping approaches by urban planners, academics and local government representatives who seek bottom-up, publicly driven approaches to development, planning and decision making (Kravagna, 2010). This reflects the reforms in Western (British) planning policy which increasingly promote a discourse of localism and publicly engaged decision making (Gordon & Koo, 2008; P. Jones, Layard, Speed, & Lorne, 2015) .This is not to say that biomapping and participatory mapping practices are a panacea for collecting embodied, geolocated data- as Nold himself has highlighted- "in recent years there have been so many people, companies and institutions who have tried to copy or imitate the Biomapping device and use it for banal, exploitative or anti-social purposes" (n.d.; n.p). In line with Spinney (2015), here then I would argue that whilst we maintain a degree of skepticism towards the notion that technological surveillance tools such as GPS trackers and wearable/mobile image and sensory information gatherers provide us with value free data, I am of the opinion that there is scope within the remits of these technologies and research praxis to

repurpose them for laudable civic aims. In other words then, the "subjective, transient and trivial" experiences of people taking part in physical activity and sport, need not be sidelined in the use of such technologies (Relph, 1976, p. 4). Rather, they may be used as tools to instigate deeper qualitative reflection and engagement on social and cultural practices that foreground the role of the mobile body in space. One such example that adopts this kind of multilayers approach (including mapping and follow-up interviews) that *does* emanate from the field of health and wellbeing, is Bell et al's (2015) research which explores both the spatial distribution and experience of people's green and blue space based activities to better understand the value and affect of landscape featrures.

Popular Culture

An interesting caveat to the lack of engagement by academics in sport and leisure research with community mapping activities is that outside of academia, sport and leisure settings are some of the most mapped, shared and analysed settings of all. This is what Lupton has described as the "domestication" of health technologies into everyday use, and the subsequent "taming" for usability they undergo in the process (2013, p. 400). As such, whilst the general public are increasingly employing technological innovations to quantify various aspects of their health and physical activity in relation to their spatial environs, academics exploring the sociological side of physical activity and health are only just beginning to expand their "technological habitus" and with it their data gathering approaches (Freund, 2004, p. 273). Not only are people increasingly mapping their runs, walks and bike rides and sharing these through dedicated and general social media sites, but they are also using this sophisticated GPS data (including location, gradient, pace, altitude, terrain type, time) often alongside physiological and performance data (heart rate, pulse, calories burned), to interpret for themselves how the

landscape and environmental conditions affect sport/leisure practice and embodiment. Whilst this in itself is a relatively well documented phenomenon (Barrett, Humblet, Hiatt, & Adler, 2013; Rich & Miah, 2014; Swan, 2012), what is particularly interesting is the growth of ad-hoc ways in which social media users tie emotion and subjective understandings of the physically active self onto these landscapes. Online interfaces such as, MapMyRun, Nike+, The Running Bug, Garmin Connect and Strava all offer varying degrees of sophistication for members to add how they '*feel'* to their activity logs. Despite 'good', 'ok' and 'bad' (or equivalent) tick box options, or even open-ended text boxes being rudimentary, their inclusion highlights a demand for combining the 'quantified' and 'qualified' self in an integrated facility that aids the practitioner to gain a more holistic understanding of themselves and their movements/relations in/to the urban landscape. One element of importance given to the recording and visualisation of both physical movement and the embodied and emotional affects that they give rise to that strikes as interesting, is that personal body knowledges and histories are becoming predominantly visual (in the sense that they are re-lived via the screen), rather than solely visceral and haptic (in that they are relived *in* the body). Lupton argues, in relation to this shift in sensory reflection, that such biosensing and GPS technologies can foster greater reliance on objective measures of performance and health when compared to the direct unmediated cues offered by the "real, fleshy body" (2013, p. 398).

Additionally, not only are these technologies commonly engaged with for their 'intended' use, they are also giving rise to forms of spatial and embodied expression that, akin with artistic projects, are challenging how users understand their local

environments and indeed their sense of community belonging. *Figure Running*[4], as an example illustrates how using sport technology has led to an offshoot of physico-artistic practice, whereby runners study maps in order to identify urban pathways that link together to create representational forms. In essence GPS trackers in such use transform the runner into a human pencil, drawing shapes, and objects onto local landscapes which can then be shared online or printed. By taking part in such activities, runners take on new pathways through the city in order to complete their desired imagery outputs, consequently instigating exploration and diversion from their habitual routes. Not only do such popular culture mapping applications draw people in to physical activity in new and engaging ways, they also offer opportunities for researchers to carry out creative/participatory mapping projects, with minimal financial outlay or expert technological knowledge. In a performative article that echoes these aims Jones (2014), offers an illustration of what such practices both feel and look like within a cycling context. Drawing the word "RIDE" across the virtual landscape of Birmingham, Jones highlights not just the practicalities involved in physical movement through space (cycle equipment, timing, road layouts etc.) but he also highlights the ways in which attempting to engage in an "artisitic" practice, what I will call *figurecycling*, challenged his awareness of a landscape he routinely passes through yet to which he pays little attention, including the subsequent alteration to the affective resonances produced by this movement (e.g. apprehension/fear of the fading light, anger/frustration towards other road users, shock/surprise at the effort to overcome gradients etc). Similar work that employs this *human as pencil* and *landscape as paper* approach is also evident more squarely situated within the arts world. Concentrating on running, the work of

[4] Examples can be seen on the dedicated social media website: http://www.figurerunning.com

Tainio (2012, 2015) is exemplary in this regard, highlighting as it does, the similarities that exist between art and sport/physical culture and a consequent reformulation of how we understand and assign value to both.

The multitude of ways in which sport and leisure practitioners are engaging with these mapping tools, presents opportunities for researchers to embrace a technologically savvy population who are already interested and willing to share their knowledge and experience with wider communities (currently via social media). Thus using existing applications or developing new ones may offer new opportunities for engaging wider audiences in research practice, whilst supplementing the pathways through which researchers traditionally 'recruit' research participants. However, this does not come without new ethical and moral challenges, to be negotiated by both researcher and participant. These may involve for example, managing and anonymising traceable routines of participants, self-selectivity in participant recruitment, and ensuring participant personal safety.

The promise of creative mapping for sport and leisure studies

Having reviewed some of the ways in which creative mapping has been embraced in wider academic disciplines and in general popular sport/leisure practice, in the remainder of the paper I turn to outlining how engagement with mapping technologies, methods and outputs can push forward research in sport and leisure studies.

The Methodological promise

It is commonly remarked upon, that theoretical and philosophical advances in the social sciences are developing at a pace that is putting significant strain on the methodological tools and techniques developed for social inquiry (Latham, 2003; H. Lorimer, 2005; J. Lorimer, 2010). This has become particularly apparent since the 'cultural' and more

recent ‘affective’ turns that have increasingly entrenched contemporary sport and leisure studies discourses (Anderson, 2012; Avner et al., 2013; Pavlidis & Fullagar, 2012; Thorpe & Rinehart, 2010). Social scientists continue to grapple with the challenges of *giving* a voice and agency to research participants [sic. collaborators], and arguably even more problematic are the difficulties faced when *collecting* and *writing* up emotional, fleeting, sensory, subconscious moments of spatial and interrelation embodied experience (Merchant, 2011). More specifically, within sport and leisure studies there is an increasing interest not just in ‘affect’ and ‘subjectivity’ generally, but the role of space/place (depending on Lefebvrian /DeCerteauian theoretical framings) in instigating or shaping these in sport and leisure contexts. The work of Vertinsky and Bale (Bale, 1993, 2003; Bale & Philo, 2002; Vertinsky, 1992; Vertinsky & Bale, 2004) followed up by those working under the Physical Cultural Studies umbrella has been influential empirically and methodologically in this regard (Friedman & van Ingen, 2011; Silk, 2004; Silk & Amis, 2005).

Building on these conceptual advancements, creative/participatory mapping approaches offer a future potential direction for research on space, subjectivity and representation. They provide a valuable means for enabling research participants to take control of a multitude of research variables; such as which (micro and macro scale) sport/leisure spaces are explored and brought to the attention of the project organizers, and which emotional or physiological strains are elucidated.

I would argue that existing human-environment relationship mapping tools and methodologies (depending on the approach employed) already have the potential to address these non-representational socio-spatial issues with rigor and impact. As Parks argues, GPS drawing can serve a ‘spatial notebook’ or ‘plotting the personal’ to stimulate later discussion of places and events (P. I. Jones, 2014; Parks, 2001).

Consequently, if academic work begins to pursue cartographic forms of inquiry and incorporate or combine such approaches with other methods of data collection and technologies of analysis/interpretation, then it could go a long way to 'getting at' more holistic understandings of the influence of spatial infrastructures on sport, leisure and physical activity performances, including; physiological, emotional and psychological affect, motivation/take-up, longevity and sustainability of practice. Additional methods could be in the form of video-diaries/video elicitation (Merchant, 2011), geocoding photo-voice approaches (Wang & Burris, 1997), alongside more traditional use of dictaphones, heart rate monitors, sports bands, activity trackers etc. Furthermore, combinatory methods could include auto-ethnography; interviews; focus groups (Nold, 2009); mobile methodologies such as go-along interviews (Bell et al., 2015; Spinney, 2015), mobile video ethnography (Cook, Shaw, & Simpson, 2015; Spinney, 2006); or memory work (Allen-Collinson & Hockey, 2011; Rose, 2007). Indeed, an interesting example that illustrates this argument is offered by Cook et al (2015) in their study on running in Plymouth. In this context the production of maps that detail the running routes of their participants offer researchers an insight into the patterns, routes, agency and spatial characteristics of the running encounter, whilst their follow up mobile video ethnography and go-along interviews yielded more subjective insights into personal and "emotionally charged" responses to the environment and the act of running through the city. As I (removed for review) and others (Bell et al., 2015; Cook et al., 2015; Nold, 2009; Spinney, 2015) have argued, technological methodological innovations are often most lucrative when the data they produce is used to guide/instigate discussion in follow up interviews, workshops or focus groups, when participants are able to 'flesh out' and give meaning to what might be quite abstract, limited or numerical data.

This last point highlights a further methodological opportunity for those who

choose to embrace and integrate creative/participatory mapping approaches into forthcoming research projects. The future scope of mapping is extensive, but at present those engaging with it are generally artists, mixed methods experts or qualitative researchers, 'dabbling' and/or experimenting with the problematic task of quantifying emotion, working from creative/performative paradigmatic standpoints. Whilst such research is valuable and necessary both in terms of methodological and theoretical advancement, we are missing opportunities to maximize the social, political, environmental and economic impact that sensory/emotional/physical mapping could achieve if it were scaled up to generate 'big(ger) data'. Projects that are run by interdisciplinary teams (including for example health (social)scientists, sport/leisure sociologist, urban modelers, statisticians, software developers, engineers, GIS experts), could more readily innovate practice, identify trends and determine relationship significance levels, that could truly change the way we understand and study physical movement through space. Such a project would not be problem free though, as Boyd and Crawford (2012, p. 662) have argued, big data could help us to "create better tools, services, and public goods […but it could] usher in a new wave of privacy incursions and invasive marketing". Furthermore it threatens to promote Derridean (1996) divides between those with and those without access to 'the archive'. More specifically, there is also a risk that the 'scaling-up' of creative/participatory approaches to cartography will inevitably lead to a loss of (qualitative) detail, respondent subjectivity and ultimately creativity (the very element of mapping techniques being commended in this paper), as data collection activities become standardized and optimized for the required efficiency needed to process high volumes of data.

The representational promise

I have already noted that methods of data collection have long been problematized for

not keeping up with conceptual progression in the social sciences, and increasingly so within the sociology of sport and leisure. Concurrently, un-progressive approaches to the ways in which data is *written* up and presented has been blamed on the confines and constraints imposed by publishers and restrictive journal 'styling' (H. Lorimer, 2005). However, with the growing emphasis placed on the *impact* of research activities, academics are increasingly moving away from (or supplementing) written research outputs, to experiment with artistic, pictographic, videographic and interactive forms of representation which are more meaningful to a wider (non-academic) audience. These outputs are often easily shared via social media and other non-academic platforms, facilitating access and generating interest from wider audiences than ever before. Creative/participatory mapping can feed into this movement as the visual representations produced by the researcher can be tailored to the needs of the audience, with maps able to display complex or simple spatial relationships interactively and pictographically.

A result of producing imagery that can convey data quickly and easily, is that cartography can be used as a tool for identifying community needs (Perkins, 2007), fostering debate and instigating change, arguably more readily than portraying similar research findings through collections of quotes or decontextualized statistics. An interesting example of this in practice comes from the work of McGookin and Brewster (2013) who have used a combination of interview, questionnaire and cartographic information from *Foursquare* to develop a running app that at once fosters the freedom of movement and human agency inherent in the activity of running, alongside the codification of landscape properties to suggest optimal areas of exploration within the vicinity of the runner. Thus, as this application illustrates- albeit within a niche context- communally or individually produced maps can act as 'discourse enablers' for/between

niche or local sporting/leisure communities with urban designers, town planners, local/national government, academics, charities and organizations. However the theoretical and philosophical groundings of such activities need to remain overtly present if mapping is to truly become a means of capturing and situating sensory/embodied/emotional data. Or, as was the case with the stigmatization of visual methods before their recent renaissance and re-theorisation by sensory anthropologists (Howes, 2003) – display centric representations of human-environment relations run the risk of reinforcing the ocular centric critique levered upon GIS and cartography more generally throughout the 1980s and 1990s.

The practical/applied promise

The practical applications of creatively mapping sport and leisure data are endless, but here I will point to a few ways in which researchers could engage with the technology to develop meaningful, applied and theoretical outputs.

Using urban space for sport/leisure activities such as cycling (Spinney, 2009), running (Allen-Collinson & Hockey, 2011; Cook et al., 2015; Hockey & Collinson, 2007), walking (Middleton, 2010) etc. is commonly promoted for the resultant health and wellbeing benefits these offer to practitioners by government, NHS and more specific charity and organizational campaigns. Such activities are presented in an overarchingly 'accessible' manner, with the contention being that anybody can step outside their front door and engage in physical activity with minimal financial outlay. However, the unfortunate truth is that it is often those who are most in need of accessible and cheap/free physical activity settings whose front doors do not necessarily open onto safe (physically and socially) or appropriate landscapes for sport and leisure. Thus, participatory human-environment relation mapping offers a variety of options for

both identifying feared and dangerous locations, difficult terrains, badly lit paths, busy traffic junctions etc., as well as acting as a crowdsourcing tool for sharing good quality and safe pathways through local urban neighbourhoods (Doran & Burgess, 2012a, 2012b; Mehta, 1999; Pain, 2001). Such data can be used not only to foster activity take up in appropriate areas, but it can also be used to target environmental design initiatives, physical activity interventions and instigate the development of new sport/leisure groups, clubs or facilities where they are needed the most.

On a more theoretical/conceptual level, cartographic based studies can begin to draw correlations between embodied states or emotions with urban design features/characteristics, levels of environmental degradation, or the balance of natural to cultural materials in the landscape. The relationships between diurnal/ seasonal changes with urban design and embodied states could also be explored in detail. All of these correlates offer researchers in sport and leisure studies scope for developing better understandings of how space and all its various elements, influence variables such as take up rates, motivation factors, continued practice statistics, or rate of health gains/loss etc. in different settings, in interesting and novel ways.

Conclusion

In this paper I have sought to outline the practices of creative approaches to participatory mapping and its potential use in sport and leisure research. As a flexible approach to tying emotional and embodied states to the physical landscape, the practice can be embraced and carried out through numerous technological tools, software applications and interfaces; both dedicated to the activity or adapted/reconstituted for the purpose. These can be of varying degrees of sophistication either facilitating simply the collection of GPS data with emotional data added in an ad-hoc manner (post

activity), or with real time capture of scalar variables through sound, imagery or GSR data. I have noted, that whilst the general public are readily embracing a variety of these technological combinations for personal use, sport and leisure researchers have yet to incorporate or adapt existing methods/tools, and are consequently missing out on the development of alternative/creative/participatory ways to explore the links between space and sport/leisure practice, and the resultant knowledges these might create.

Here I have argued that embracing mapping technologies can offer three key benefits. (1) Methodologically it can facilitate the communication and capture of difficult to 'get at' embodied states and emotions that so often elude research foci and methodological practice. (2) Representationally, creative/participatory mapping can both empower/give agency to research participants and local communities who, as a result, have the means to capture essences of environments and issues that are important to them. For example, if readily embraced, (a) innovative approaches to mapping can go a long way to fostering community engagement in: the identification of (un)safe urban routes for sport/leisure practice (e.g. running, cycling), (b) the development and site identification of health/physical activity initiatives or interventions and (c) the design of urban landscapes of sport/leisure. All with the additional benefit of offering a visually simplistic way of presenting data that is communicable to multiple audiences. (3) Practically mapping can offer new insights into spatial influences on sport and physical activity that have the potential to open up and foster interdisciplinary and cross-sector relationships. As we continue to negotiate a lag in methodological innovation following the theoretical advancements of the last 10 years, creative/participatory mapping at least nods towards attending to inherent research practice issues, albeit in a specific and not unproblematic way.

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